

INTERNATIONAL BOUNDARY AND WATER COMMISSION, UNITED STATES AND MEXICO



Steve Smullen, Principal Engineer

Rio Grande Citizens' Forum

August 9, 2007

Rio Grande Canalization Project

- Constructed 1938-1943
- Water delivery and flood control project
- 106 river miles from Percha Dam, NM to American Dam at El Paso, TX
- 130 miles of flood control levees



Rio Grande Rectification Project

- Constructed in 1930s
- El Paso, TX-Cd. Juarez to Ft. Quitman, TX
- Boundary stabilization and flood control project
- 85 miles of U.S. levee



Flood Mapping

- FEMA is updating flood insurance rate maps
- FEMA requires levees to contain the 100-year flood with 3 ft. freeboard
- USIBWC notified FEMA last year that it could not certify all levees as meeting this requirement
- FEMA will map flood risk as if the levees did not exist at all
- Water surface elevation for 100 year flood is projected until it intercepts ground elevation on both sides of river



Dona Ana

[illegible][illegible]


FEMA maintains information about map features, such as street locations and names, in or near designated flood hazard areas. Requests to revise information in or near designated flood hazard areas may be provided to FEMA during the community review period, at the final Consultation Coordination Officer's meeting, or during the statutory 90-day appeal period. Approved requests for changes will be shown on the final printed FIRM.

[illegible]

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP PANEL:

To determine if flood insurance is available in the community, contact your insurance agent or call the National Flood Insurance Program at 1-800-426-6424.



NATIONAL FLOOD INSURANCE PROGRAM	<div style="text-align: right;"> PNEL 5007F </div>													
	FIRM													
	FLOOD INSURANCE RATE MAP													
	EL PASO COUNTY,													
	TEXAS													
	AND INCORPORATED AREAS													
	PNEL 507 OF 800													
	<small>(USE MAP INDEX FOR FIRM PANEL LAYOUT)</small>													
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EFFECTIVE DATE														
Federal Emergency Management Agency														

Flood Mapping

- FEMA has a public appeal and protest process
- USIBWC believes FEMA's model may overestimate flood risk
- Simplified methodology does not take into account levees in place, volume of flow, attenuation due to infiltration, or the lower water surface which is present in a wider floodplain.
- USIBWC will propose additional modeling to accurately map flood risk

Flood Mapping

- Draft maps for Doña Ana County released April 2007
- FEMA issued second of two notices on July 11 to begin the 90 day appeal period.
- Based on the severity of the city's and county's concerns, and due to the intervention of Senator Bingaman, FEMA agreed to halt the FIRM process and fully review the methods and analysis leading to the release of the DFIRMs. There is a chance that FEMA will issue revised maps and will meet again with the county and others to answer follow-up questions. The 90-day appeal period will not begin until after that.
- Draft maps for El Paso County were released July 2007
- FEMA public meeting scheduled for August 22, 6 pm at City Hall



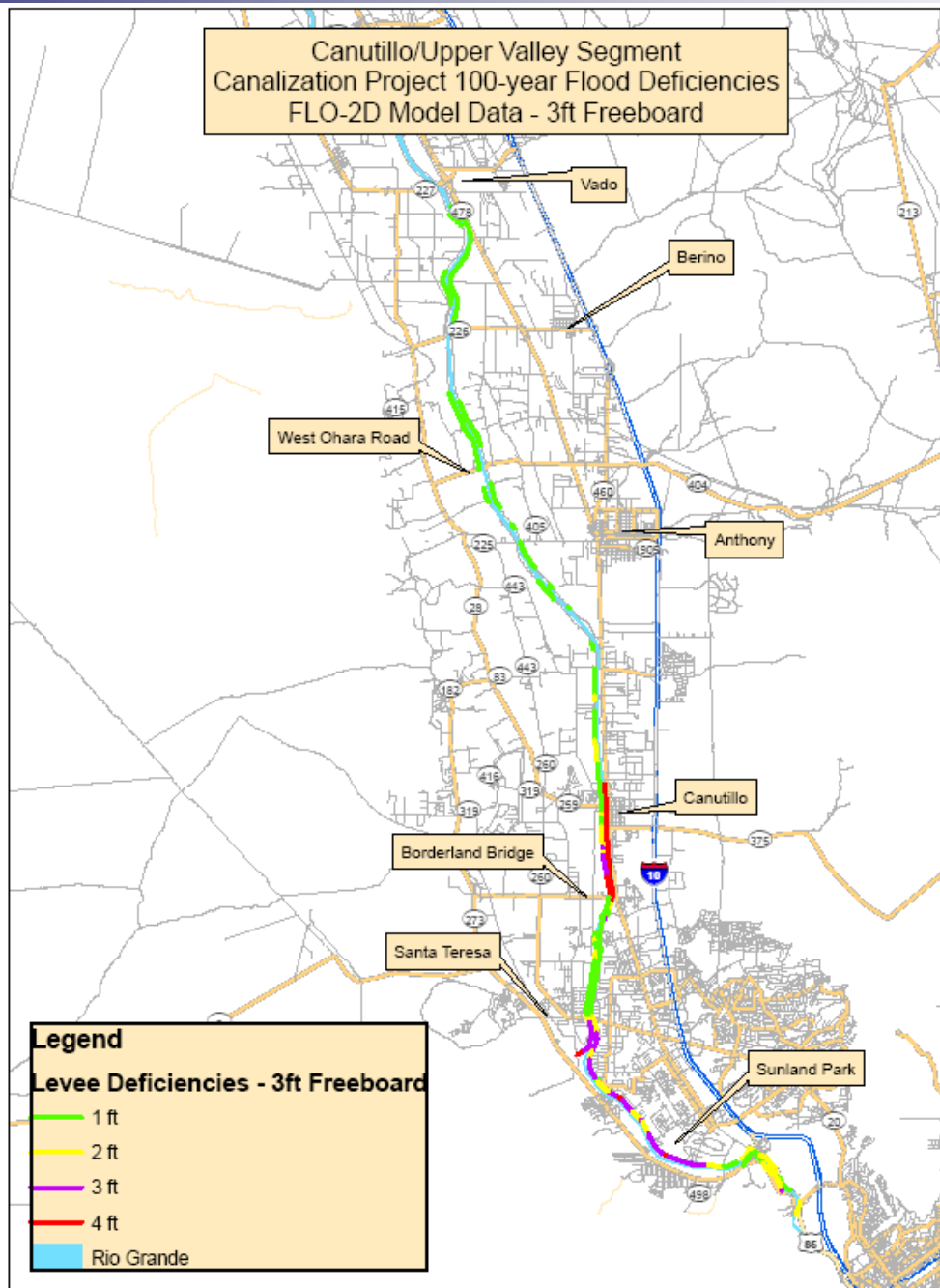
FEMA Interagency Report

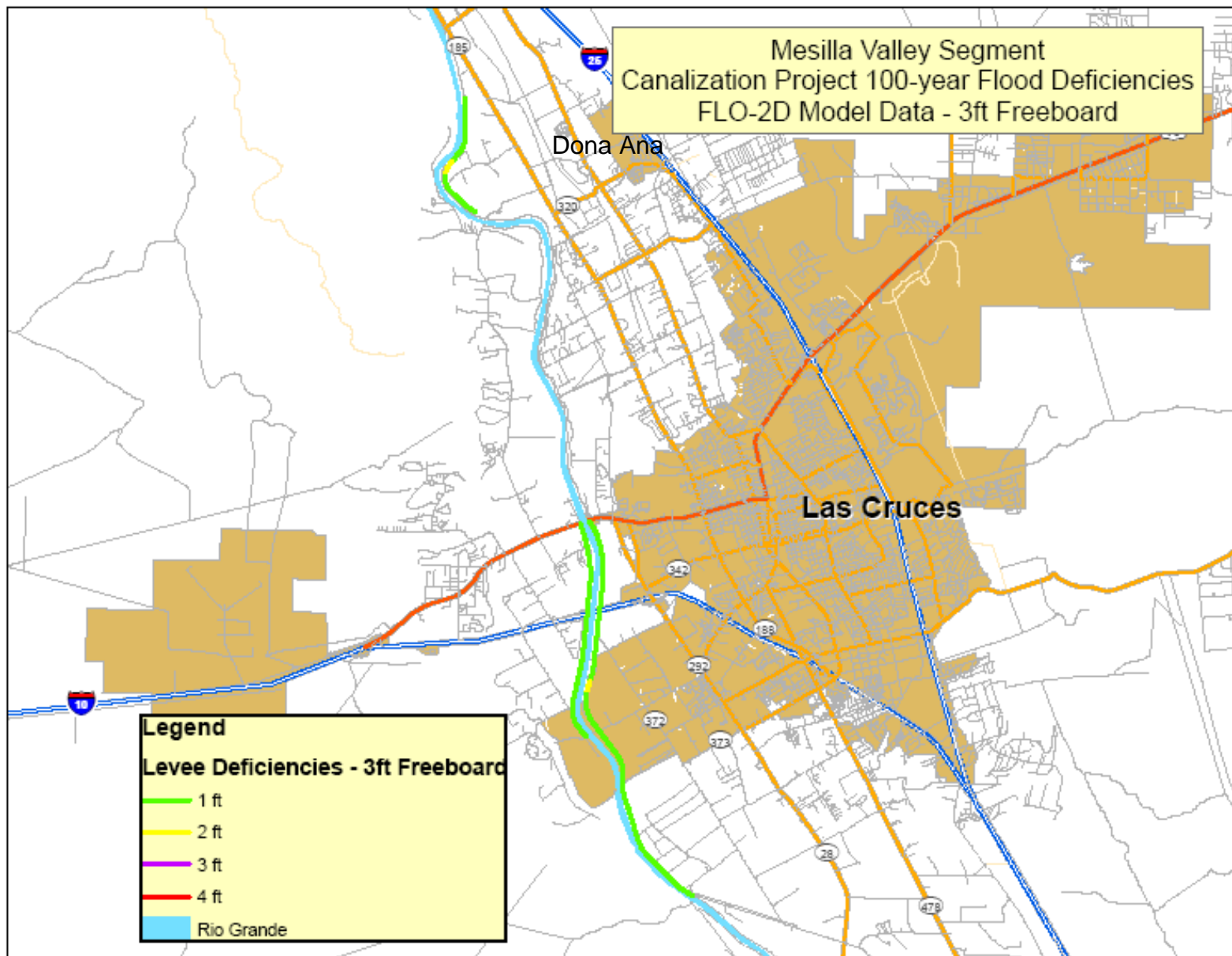
- FEMA released in September 2006
- Proposes a risk based approach to include depth of flooding, number of people affected, type and density of development, etc. and a phase out of the 100 year 3 feet freeboard requirement
- Suggests possibly greater return frequencies in urban areas, ie 500 year flood
- Recommends levee inventory; 10 year inspection report to FEMA

Levee Status – Doña Ana County

- Structural integrity is acceptable, levee height is deficient for 38 miles in Doña Ana County
- USIBWC proposes to raise levees:
 - Vado to American Dam – 16 miles in New Mexico (\$8.9 million)
 - Mesilla Valley – 11.55 miles (\$4.3 million)
 - Hatch/Rincon/Tonuco Bridge area – 10.48 miles (\$6.5 million)

Canutillo/Upper Valley Segment
Canalization Project 100-year Flood Deficiencies
FLO-2D Model Data - 3ft Freeboard



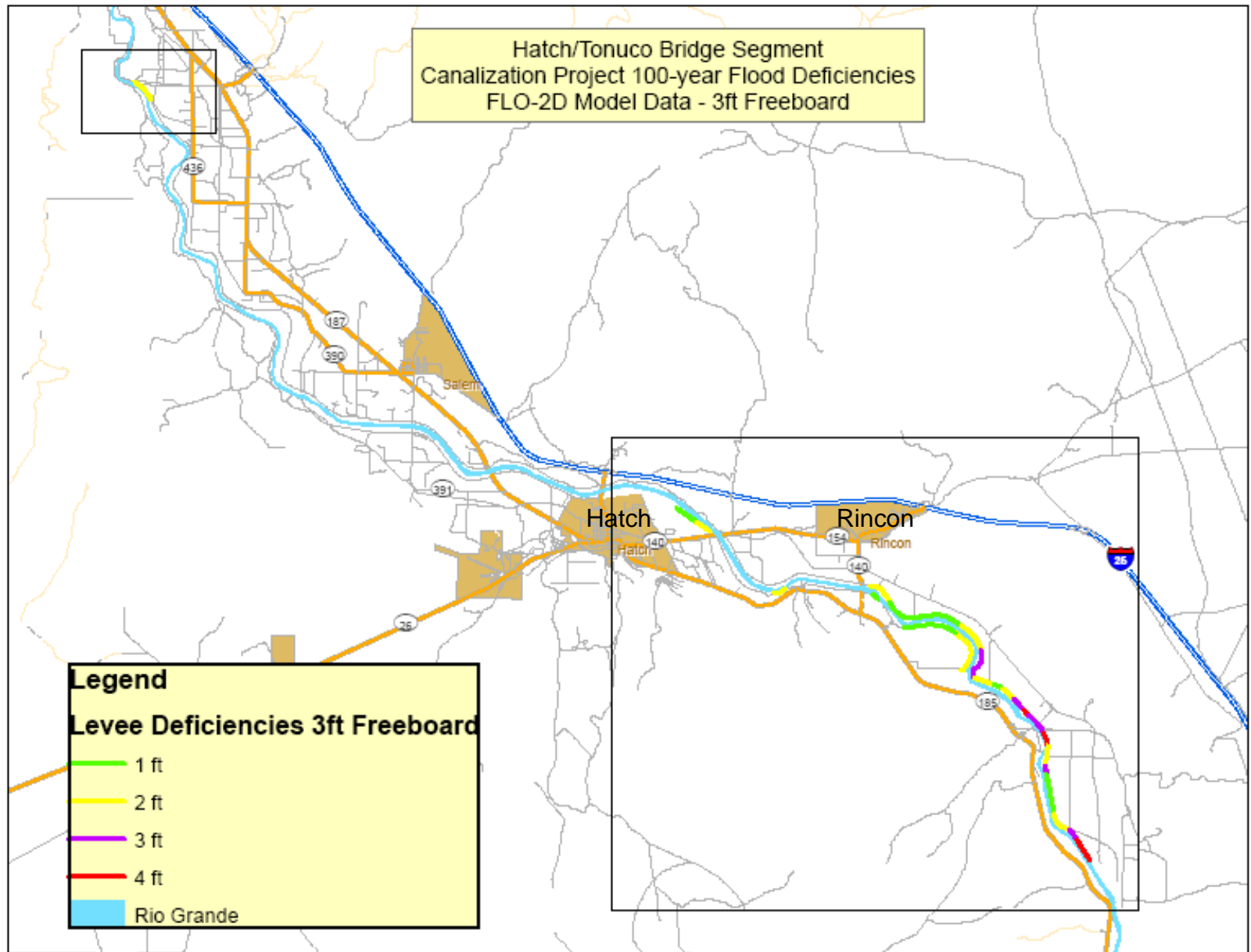


Hatch/Tonuco Bridge Segment
Canalization Project 100-year Flood Deficiencies
FLO-2D Model Data - 3ft Freeboard

Legend

Levee Deficiencies 3ft Freeboard

- 1 ft
- 2 ft
- 3 ft
- 4 ft
- Rio Grande





Funding and Priorities–Doña Ana Co

- Levee raising subject to federal appropriations, Senate is proposing \$11.7M to raise New Mexico levees
- If fully funded this will allow levee raising in NM from Leasburg to Courchesne Bridge. Should partial funding be appropriated, focus will be on Leasburg to Texas line using USIBWC force account personnel.



Environmental Considerations – Canalization Project

- Rio Grande Canalization Project EIS analyzes alternatives for environmental enhancements to accompany levee work
- Selection of an alternative/Record of Decision is on hold pending outcome of collaborative process between environmental groups and EBID
- Environmental enhancements subject to availability of federal appropriations



Environmental Considerations – Canalization Project

- Vegetative growth typically increases water surface elevations
- USIBWC is currently using FLO2D hydraulic model to evaluate dense growth throughout the floodplain and its effect on levee deficiency
- Evaluation of future potential condition for levee raising



Environmental Considerations – Rectification Project

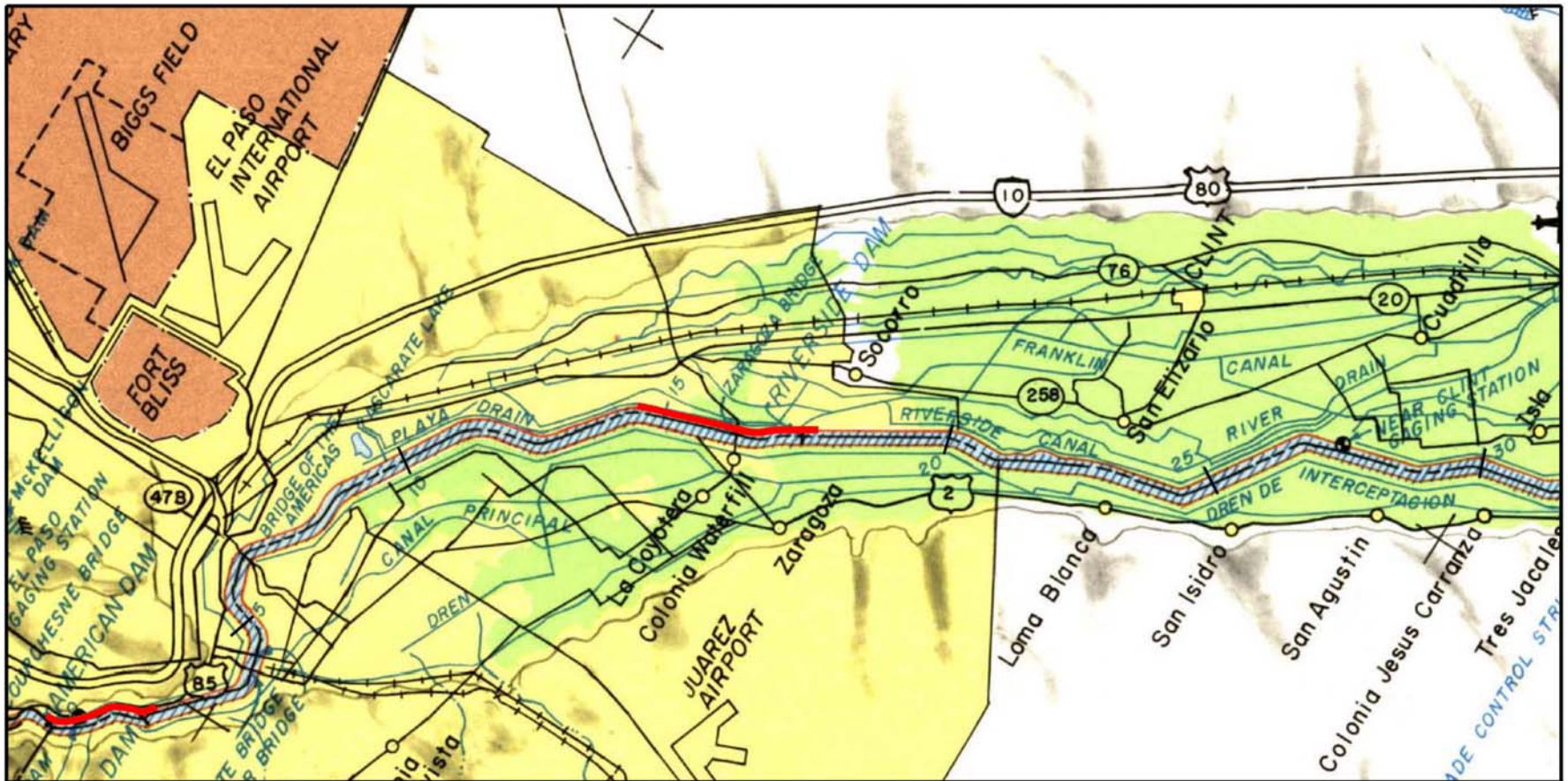
- Draft PEIS out for public comment until September 24, 2007
- Public meeting scheduled for August 21, 2007 at 6:00 pm at USIBWC Headquarters
- Three alternatives under consideration
 - Enhanced Operation and Maintenance
 - Integrated Water Resources Management
 - Multipurpose Project Management

Levee Status – El Paso County

- Structural integrity is acceptable, levee height is deficient for 26 miles in El Paso County.
- Cost to raise levees in El Paso County is estimated \$21.3 million
- Senate is proposing \$15.0M for Texas levees, much of which will be allocated to similar projects in the LRG Valley, however a portion will be used in El Paso County
- USIBWC proposes to raise levees:
 - Upper Valley – 13 miles (\$6.5 million)
 - Canutillo Floodwall – 1.5 miles (\$13.3 million), currently reviewing alternatives to reduce costs

Rectification Project- Levee Deficiency

SHEET 1 of 3

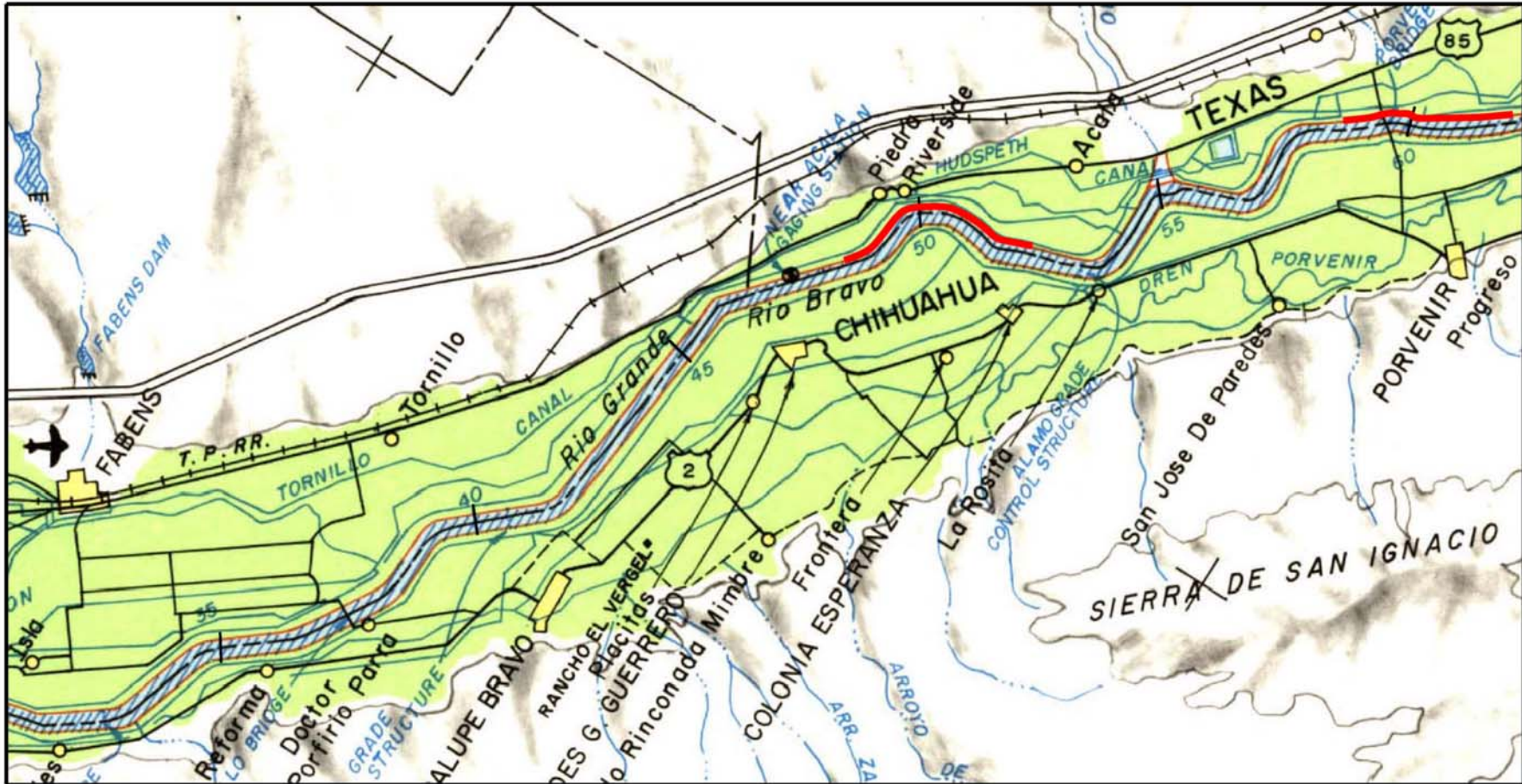


RECTIFICATION

LEVEE WITH LESS THAN 2' FREEBOARD

Rectification Project - Levee Deficiency

SHEET 2 of 3

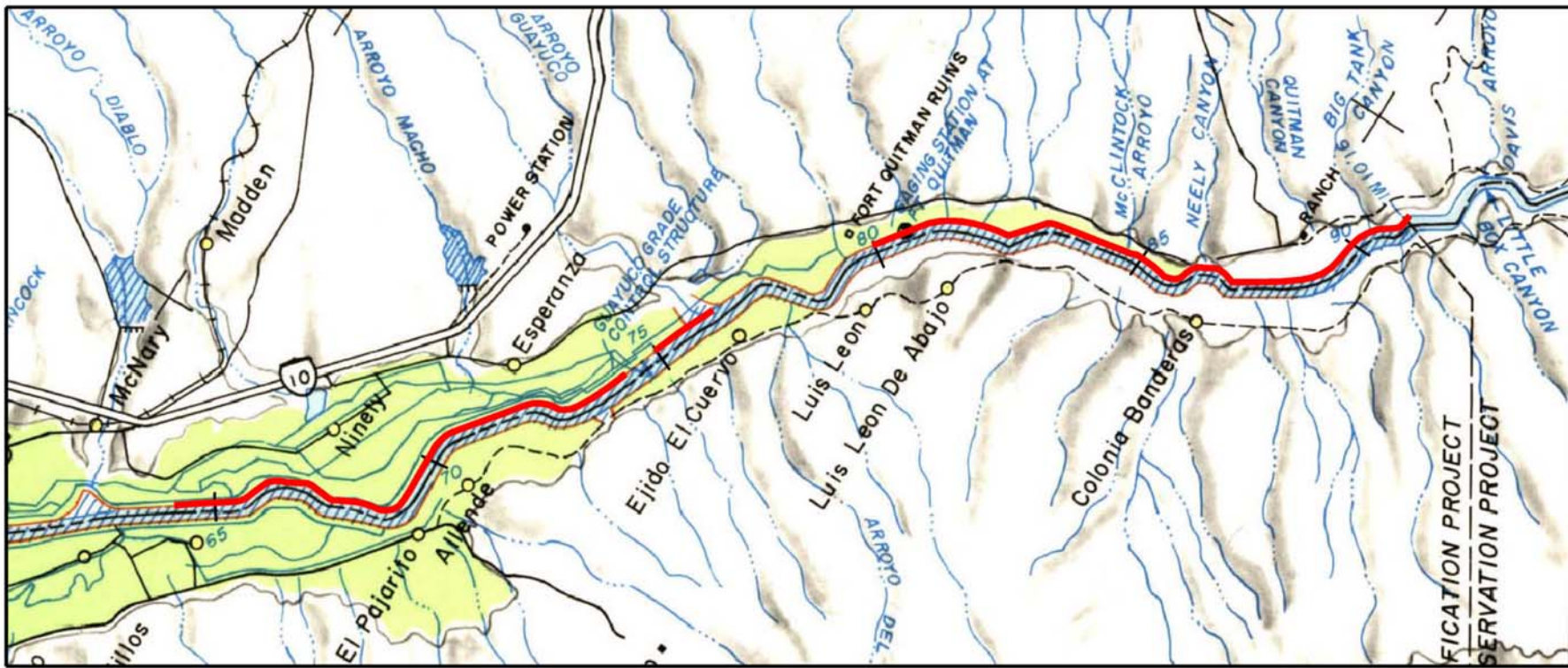


RECTIFICATION

LEVEE WITH LESS THAN
2' FREEBOARD

Rectification Project - Levee Deficiency

SHEET 3 of 3

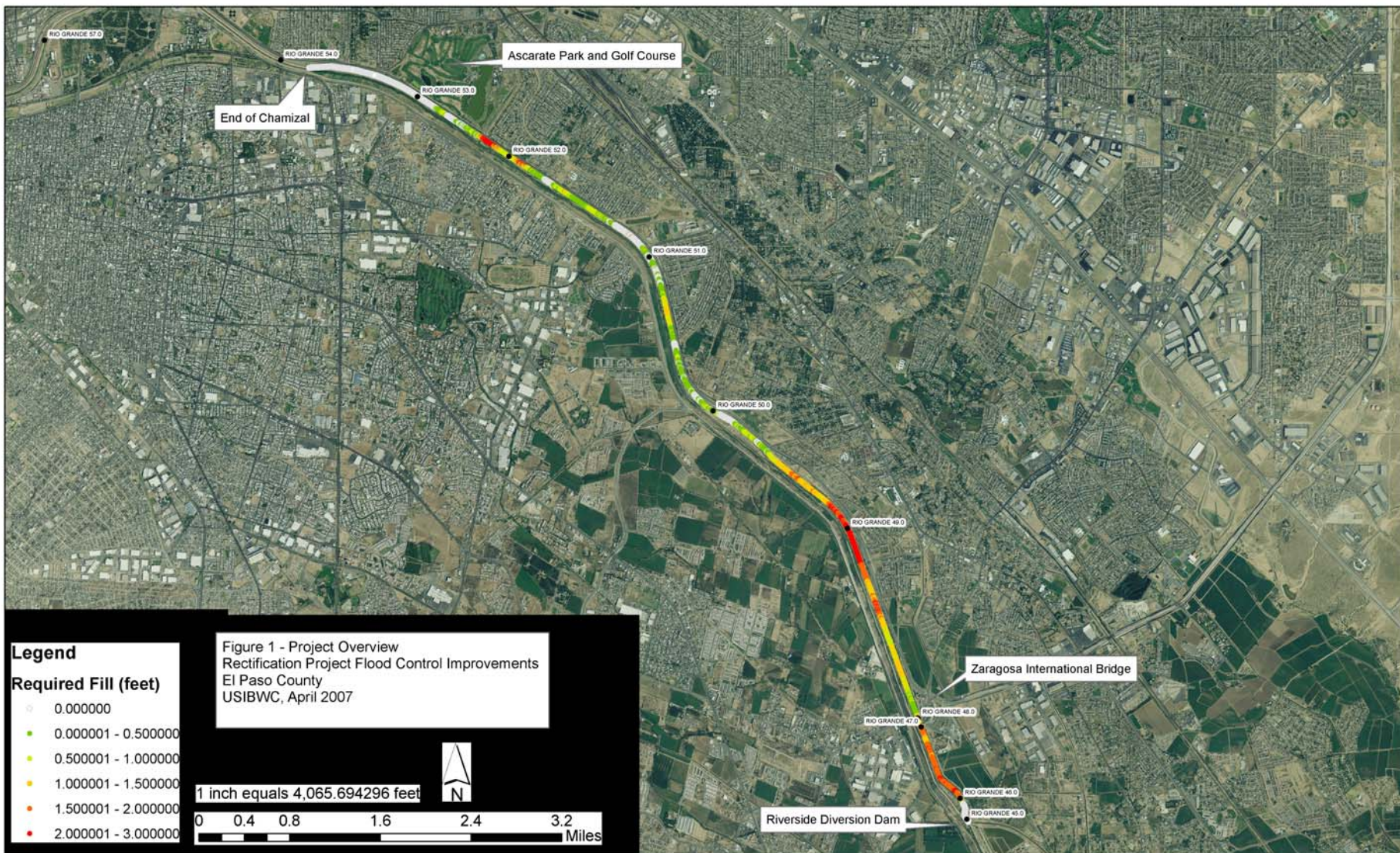


RECTIFICATION

LEVEE WITH LESS THAN
2' FREEBOARD

Rectification Project –Partial Certification

- USIBWC plans to certify Rectification levee from International Dam to Ysleta-Zaragoza Bridge area by Dec 2007.
- Affected Area:
 - .5 miles of improvements from International Dam to the beginning of the Chamizal (in progress)
 - 7.4 miles of levee raising from end of Chamizal (upstream of Ascarate Park) to Ysleta-Zaragoza Bridge (completed)
- Estimated Completion – September 2007
- Estimated Cost - \$1.0 million
- Pending – closure of Ascarate WW, floodwall construction at Harts Mill WW, City of El Paso drain closures (all expected by end of calendar year)









Sediment Removal – Dona Ana County

- Sediment has been removed at selected arroyo mouths within the Canalization Project and above Mesilla Dam and American Dams in 2006 and 2007
- Additional sediment removal will be performed as funding becomes available.
- Collaborative study for Canalization EIS is addressing the timing and amount of dredging required within areas of the project.



Sediment Removal – El Paso Co. Chamizal Project

- 100,000 cubic meters.
- Estimated cost: \$0.65 million.
- Work being performed by Mexico under agreement between the two Sections of the Commission
- Work is approximately 40% complete





INTERNATIONAL BOUNDARY AND WATER COMMISSION, UNITED STATES AND MEXICO



U.S. Section

(915) 832-4100

www.ibwc.state.gov